

**Allotment Assessment and Evaluation Report for
New Mexico Standards and Guidelines for Public Land Health
East Rio Grande (#621) – September 3, 2010**

Permittee/Lessee		<u>Authorization Number</u> currently not permitted
Livestock Use	Preference AUMs	<u>Allotment</u> <u>Active</u> <u>Suspended</u> 00621 to be determined
	Period of Use / Kind of livestock	<u>Allotment</u> <u>Number/Kind</u> <u>Season of Use</u> East Rio Grande n/a n/a
	Percent Public Land	AUMs are authorized at 100% public land
Allotment Profile	Physical Description	<p>Allotment 621 is located approximately 2.5 miles north of Arroyo Hondo, New Mexico</p> <p>East Rio Grande Allotment borders the Rio Grande canyon rim on the west border. The allotment is comprised of a combination of sagebrush uplands and pinyon-juniper woodlands within a system of small drainages. Elevations range from 6,800 to 7,200 feet.</p> <p>Six soil types are identified within the BLM parcels. Soils within the parcels are:</p> <p>Amalia-Manzano association, steep. This soil consists of gravelly loam and clay loam with a rooting depth of 60 inches or more. The parent material is derived from alluvium. Average annual precipitation is 13 inches. Hazards for erosion are moderate. Vegetation is characterized by blue grama, galleta, western wheatgrass, big sagebrush, oneseed juniper, and pinyon pine.</p> <p>Manzano clay loam, 0 to 5 percent slopes. This soil consists of clays loams, with rooting depths over 60 inches. Parent material of mixed alluvium comprises this soil. Average annual precipitation in this area ranges from 12 to 14 inches. Vegetation is characterized by western wheat, blue grama, galleta, sideoats grama and sagebrush.</p> <p>Orthents-Calciorthids association, very steep. This soil consists of gravelly clay loams, with rooting depths over 60 inches. Parent material of mixed alluvium comprises this soil. Average annual precipitation in this area ranges from 13 to 15 inches. Hazards for erosion are high. Vegetation is characterized by pinyon, juniper, blue grama, and sideoats grama.</p> <p>Orthents-Rock outcrop association, very steep. This soil consists of gravelly clay loams, with rooting depths over 60 inches. Parent material of mixed alluvium derived from the Santa Fe Formation comprises this soil. Outcroppings are</p>

		<p>basalt escarpments. Average annual precipitation in this area ranges from 13 to 15 inches. Vegetation is characterized by pinyon, juniper, blue grama, and sideoats grama.</p> <p>Sedillo-Silva association, strongly sloping. These soils consist of loams, with rooting depths over 60 inches. Parent material formed from mixed alluvium and eolian material comprises this soil. Average annual precipitation in this area ranges from 10 to 12 inches. Vegetation is characterized by western wheat, blue grama, and rabbitbrush.</p> <p>Silva-Sedillo association, gently sloping. These soils consist of loams, with rooting depths over 60 inches. Parent material formed from mixed alluvium and eolian material comprises this soil. Average annual precipitation in this area ranges from 11 to 13 inches. Vegetation is characterized by western wheat, blue grama, galleta and fourwing saltbush.</p>						
	Land Status Acreage	<table> <tr> <td><u>BLM</u></td> <td><u>State</u></td> <td><u>Private</u></td> </tr> <tr> <td>946</td> <td>0</td> <td>0</td> </tr> </table>	<u>BLM</u>	<u>State</u>	<u>Private</u>	946	0	0
<u>BLM</u>	<u>State</u>	<u>Private</u>						
946	0	0						
	Management Objectives	The allotment is under a 'Maintain' ('M') management category. 'M' category allotments are managed to maintain current satisfactory ecological condition.						
	Key Forage Species	Blue grama, western wheatgrass, sideoats grama, galleta						
	Grazing System	Seasonal use						
Current Conditions / Management	Actual Use	Actual use reports were not submitted. This allotment has not been grazed since 1991.						
	Utilization	Due to the lack of staff, utilization studies have not been conducted; however, no livestock use is currently authorized on the allotment. Some use from wildlife was seen during the evaluation.						
	Climate	<p>The past water year (Oct. 1, 2009 – Sept. 30, 2010) the average temperature has been slightly below average (0 to 1 degrees Fahrenheit) and precipitation above average (0 to 3 inches). The winter was slightly wetter (1.5 to 3 inches) and was colder (3 to 4 degrees Fahrenheit). The spring was drier (0.75 to 1.5 inches) and was colder (1 to 2 degrees Fahrenheit). This should provide below average plant growth for cool season plants. The summer precipitation was below average (0 to 1.5 inches) and slightly warmer (1 to 2 degrees Fahrenheit) which should provide below normal growth for warm season plants.</p> <p>Global climate change resulting from increasing atmospheric CO₂ levels may accelerate rates of plant extinction and result in shifts in ecosystem structure (species diversity) and function. We anticipate that our monitoring efforts will track vegetation shifts allowing for management modifications to address local range impacts resulting from global climate change.</p>						

	Trend	<p>In 1984 monitoring transects and photo points were placed in the allotment to establish vegetation trend. The study site was relocated in 2010. The full findings are kept in the allotment file at the Taos Field Office, but are summarized below.</p> <table border="1"> <thead> <tr> <th>Plot #1</th><th>2010</th><th>1984</th></tr> </thead> <tbody> <tr> <td>Ground Cover</td><td>(%)</td><td>(%)</td></tr> <tr> <td>bare ground</td><td>49</td><td>60</td></tr> <tr> <td>criptogams</td><td>0</td><td>0</td></tr> <tr> <td>gravel</td><td>17</td><td>13</td></tr> <tr> <td>rock</td><td>1</td><td>3</td></tr> <tr> <td>litter</td><td>28</td><td>20</td></tr> <tr> <td>PLJA (Galleta)</td><td>3</td><td>0</td></tr> <tr> <td>BOGR (Blue Grama)</td><td>1</td><td>3</td></tr> <tr> <td>ARTR (Sagebrush)</td><td>1</td><td>1</td></tr> <tr> <td>AGCR (Crested Wheat)</td><td>1</td><td>0</td></tr> <tr> <td>Species Composition</td><td>(%)</td><td>(%)</td></tr> <tr> <td>PLJA (Galleta)</td><td>22</td><td>no data</td></tr> <tr> <td>ARTR (Sagebrush)</td><td>53</td><td>no data</td></tr> <tr> <td>BOGR (Blue Grama)</td><td>15</td><td>no data</td></tr> <tr> <td>AGCR (Crested Wheat)</td><td>5</td><td>no data</td></tr> <tr> <td>CHNA (Rubber Rabbitbrush)</td><td>2</td><td>no data</td></tr> <tr> <td>Astragulus spp. (locoweed)</td><td>2</td><td>no data</td></tr> <tr> <td>GUSA (Snakeweed)</td><td>2</td><td>no data</td></tr> </tbody> </table>	Plot #1	2010	1984	Ground Cover	(%)	(%)	bare ground	49	60	criptogams	0	0	gravel	17	13	rock	1	3	litter	28	20	PLJA (Galleta)	3	0	BOGR (Blue Grama)	1	3	ARTR (Sagebrush)	1	1	AGCR (Crested Wheat)	1	0	Species Composition	(%)	(%)	PLJA (Galleta)	22	no data	ARTR (Sagebrush)	53	no data	BOGR (Blue Grama)	15	no data	AGCR (Crested Wheat)	5	no data	CHNA (Rubber Rabbitbrush)	2	no data	Astragulus spp. (locoweed)	2	no data	GUSA (Snakeweed)	2	no data
Plot #1	2010	1984																																																									
Ground Cover	(%)	(%)																																																									
bare ground	49	60																																																									
criptogams	0	0																																																									
gravel	17	13																																																									
rock	1	3																																																									
litter	28	20																																																									
PLJA (Galleta)	3	0																																																									
BOGR (Blue Grama)	1	3																																																									
ARTR (Sagebrush)	1	1																																																									
AGCR (Crested Wheat)	1	0																																																									
Species Composition	(%)	(%)																																																									
PLJA (Galleta)	22	no data																																																									
ARTR (Sagebrush)	53	no data																																																									
BOGR (Blue Grama)	15	no data																																																									
AGCR (Crested Wheat)	5	no data																																																									
CHNA (Rubber Rabbitbrush)	2	no data																																																									
Astragulus spp. (locoweed)	2	no data																																																									
GUSA (Snakeweed)	2	no data																																																									
	Riparian	There are no riparian areas within this allotment.																																																									
	Wildlife	<p>Seasonal home ranges in the allotment include those for deer, elk, bear, bobcat, fox, coyote, small mammals and reptiles, bats, raptors, turkey vulture, songbirds, and a variety of insects.</p> <p>Some dietary overlap occurs between wildlife and cattle; however, best management practices would ensure that forage production within this area can support both wildlife and livestock on a sustained basis.</p> <p>This allotment has potential for future projects to enhance wildlife habitat through vegetation treatments and water developments.</p>																																																									
	Threatened and Endangered Species	<p>It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment.</p> <p>Special status species that are likely to be found on the allotment (seasonally) include bald eagle and ferruginous hawk.</p>																																																									
Findings / Rationale for the New Mexico		A Rangeland Health Evaluation Matrix was completed on September 3, 2010. This evaluation matrix is from Technical																																																									

Standards for Public Land Health		<p>Reference 1734-6 “Interpreting Indicators of Rangeland Health.” The actual matrix forms are available within the allotment file. Below is a summation of the information gathered by the on site evaluation. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be $5(\text{score}) \times 10(\text{indicators}) = 50/50 \times 100 = 100\%$ similarity, or what is expected based on an Ecological Site Description.</p> <p>Soil and Site Stability Two indicators were deemed None to Slight, three were deemed Slight to Moderate, five were deemed Moderate, and one was deemed Moderate to Extreme. Rating: 68%</p> <p>Hydrologic Function One indicator was deemed None to Slight, one was deemed Slight to Moderate, seven were deemed Moderate, and one was deemed Moderate to Extreme. Rating: 64%</p> <p>Biotic Integrity Three indicators were deemed None to Slight, three were deemed Slight to Moderate, and three were deemed moderate. Rating: 80%</p> <p>Overall Rating: 71%</p>
	Upland Standard	<p><i>Upland ecological sites are in productive and sustainable condition within the capability of the site. Upland soils are stabilized and exhibit infiltration and permeability rates that are appropriate for the soil type, climate, and landform. The kind, amount and/or pattern of vegetation provides protection on a given site to minimize erosion and assist in meeting State and Tribal water quality standards.</i></p> <p>This allotment is not meeting the Upland Standard based on the above evaluation and information. Livestock grazing has not impacted this allotment in the last 19 years. The poor rating is largely due to soil erosion and degradation. Pedestals are very common and litter amount is low. Bare ground is higher than expected for the site and many gullies show signs of active erosion. Vegetation treatments and measures to prevent erosion will improve the site and lead to better ratings.</p>

	Biotic Communities Standard	<p><i>Ecological processes such as hydrologic cycle, nutrient cycle, and energy flow support productive and diverse native biotic communities, including special status , threatened, and endangered species appropriate to site and species.</i></p> <p>This allotment is not meeting the Biotic Communities Standard based on the above evaluation and information. Generally, the expected plant species are present, but the amount of herbaceous species in the understory of sagebrush stands is minimal. The site is dominated by shrubs and tree species which compete better for nutrients, water, and light leaving understory plants at a disadvantage. These understory plants are needed to hold the soil in place and promote ecological processes.</p>
	Riparian Standard	<p><i>Riparian areas are in a productive, properly functioning and sustainable condition, within the capability of that site.</i></p> <p>The Riparian Standard does not apply to this allotment. No riparian area or vegetation is located within the allotment boundaries.</p>
Conclusion		<p>The New Mexico Standards for public land health are not being met; therefore a Determination Document is warranted. Continued monitoring will help establish future trend. It is recommended that the allotment be placed in the improve management category and make progress toward meeting standards before a permit is issued to authorize grazing again. The Biotic Communities and Upland Standards are closely related and management that helps one will have positive impacts on the other.</p>

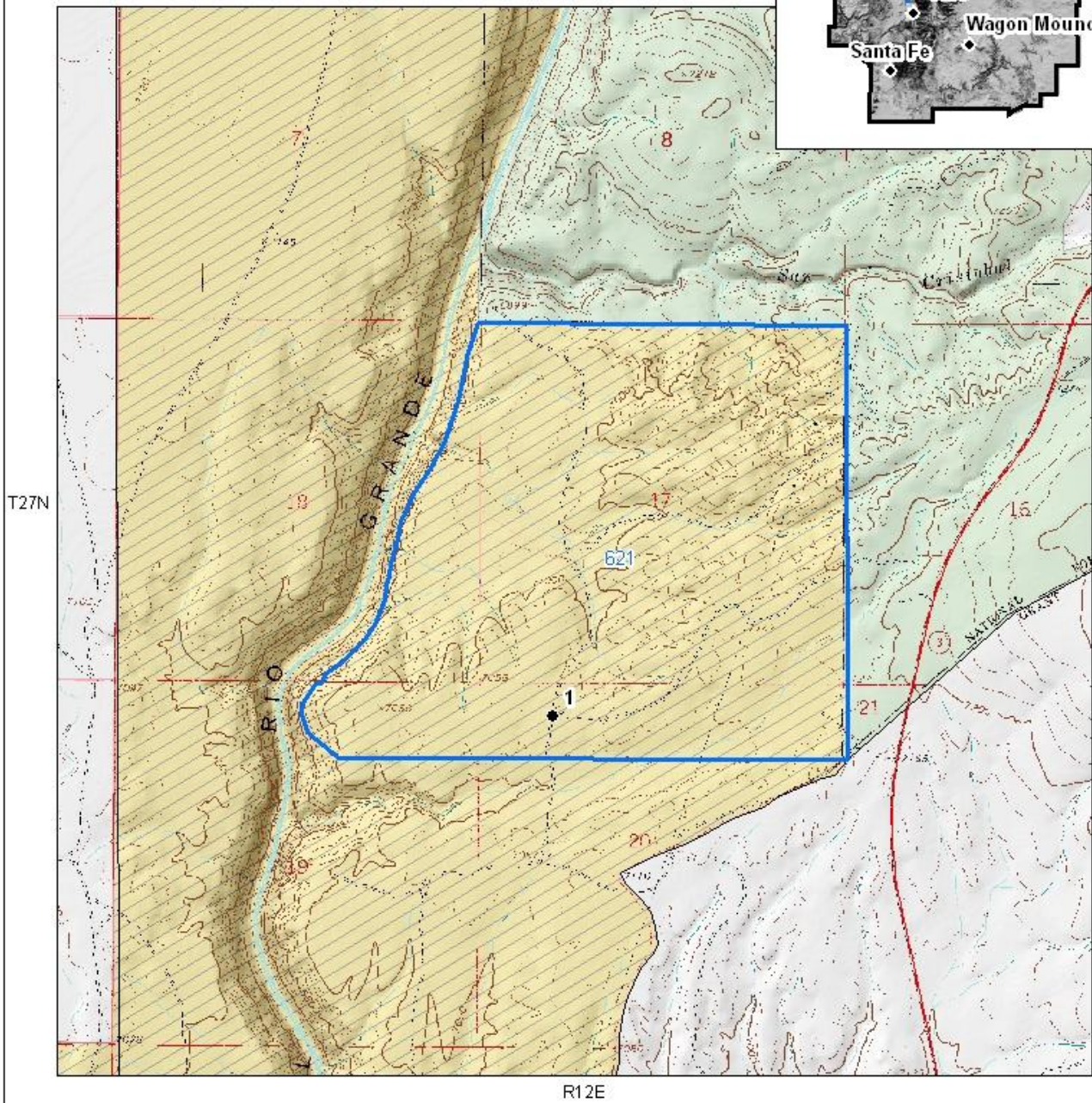
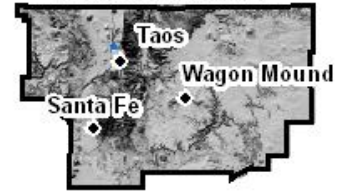
Consultation and Coordination

This Assessment and Evaluation Report has been sent or given to the affected permittee(s) / lessee(s), the interested publics and the following interdisciplinary team members for input and review:

Merril Dicks – Archeologist
 Scott Draney – Department of Game and Fish
 Greg Gustina – Fish Biologist
 Pam Herrera-Olivas – Wildlife Biologist
 Tami Torres – Outdoor Recreation Planner
 Jacob Young – Rangeland Management Specialist
 Paul Williams – Archeologist
 Valerie Williams – Wildlife Biologist

This document was prepared by: Derek Trauntvein – Rangeland Management Specialist

Taos Field Office



East Rio Grande (621)



0.0 0.1 0.2 0.3 0.4
Miles



Legend

- Monitoring Plots
- Allotment Boundary
- ▨ Bureau of Land Management
- ▨ Forest Service
- Private

Produced by the BLM Taos Field Office - GIS on:
Friday January 10, 2011

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

7.5' Topos: Arroyo Hondo